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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------------------------------------------------------------------------|-------------|----------------------|-------------------------|------------------|
| 09/862,470 | 05/23/2001 | Tsutomu Kodaira | NEC01P129-HSo | 7468 |
| 30743 | 7590 | 12/03/2004 | EXAMINER PHAN, TRI H | |
| WHITHAM, CURTIS & CHRISTOFFERSON, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190 | | | ART UNIT 2661 | PAPER NUMBER |

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,470

Applicant(s)

KODAIRA, TSUTOMU

Examiner

Tri H. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1-3</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 1 and 4-6 are objected to because of the following informalities:

In regard to claim 1, line 3; the recitations "the Internet operating" (line 3) should be changed to -- an Internet operating -- and "an IP packet" (line 8) should be changed to -- the IP packet --.

Regarding claim 4, the recitations "an IP packet" (line 3) should be changed to -- the IP packet --; "a terminal" (line 4) should be changed to -- the terminal --; "a server" (line 4) should be changed to -- the server --; "a router" (line 6) should be changed to -- the router --.

In regard to claim 5, the recitations "an IP packet" (line 3) should be changed to -- the IP packet --; "a terminal" (line 3-4) should be changed to -- the terminal --.

Regarding claim 6, the recitations "an IP packet" (line 3) should be changed to -- the IP packet --; "a server" (line 3-4) should be changed to -- the server --.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by **Jani Kiiskinen et al.** (“Data Channel Service for Wireless Telephone Links”, 01-1996, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1996-1).

- In regard to claim 1, **Kiiskinen** discloses in Figs. 1-2 and in the respective portions of the specification about the Mowgli Data Channel Service ‘MDCS’ (“*IP packet priority control system*”; For example see Fig. 1; Abstract) implemented the communication architecture for efficient operation over internetwork using TCP/IP-based communication (“*Internet operating*”); wherein the control functions of the application programming interface of ‘Mowgli Socket Interface’, e.g. “*program control*” (For example see Part 3.2), allow the client to access the TCP/IP communication services or add application specific functionality for optimizing and improving the fault-tolerance and performance of the data communication (For example see Figs. 1-2; Part 2). The MDCS provides the flow control for each data channel by using the TCP socket and Data Transfer Object ‘DTO’ priorities (“*means for setting packet priority on session-by-session basis*”; For example see Figs. 1-2; Parts 3-4) and provides multiplexing and priority

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based scheduling of data channels over wireline Internet (“*transmitting and receiving data packets under priority control*”; For example see Parts 4.2-4.4).

- Regarding claims 4 and 6, **Kiiskinen** further discloses about the application programming interface “*APT*”, e.g. Mowgli socket interface, for providing the priority for each data channel via MDCS (“*setting priority parameter*”; For example see Part 3) of the Fixed host (“*server*”) in communicating with application layer, Socket layer, TCP/UDP layer, IP layer and Network interface (For example see Figs. 1-2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jani Kiiskinen et al.** (“Data Channel Service for Wireless Telephone Links”, 01-1996, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1996-1) in view of **Jackowski et al.** (U.S.6,141,686).

- In regard to claims 2-3, **Kiiskinen** discloses all the subject matter of the claimed invention as discussed in Part 4 above of this Office action about the Mowgli Data Channel

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Service 'MDCS' implemented the communication architecture for efficient operation over internetwork using TCP/IP-based communication; wherein the control functions of the application programming interface of 'Mowgli Socket Interface' allow the client to access the TCP/IP communication services or add application specific functionality for optimizing and improving the fault-tolerance and performance of the data communication. The MDCS provides the flow control for each data channel by using the TCP socket and Data Transfer Object 'DTO' priorities ("*setting priority on session-by-session basis*") and provides multiplexing and priority based scheduling of data channels over wireline Internet. Though, **Kiiskinen** does disclose about using the API, e.g. 'Mowgli socket interface', for optimizing the data communication through the channel priorities by customized agents and proxies; but does not explicitly disclose about voice call, image data and JAVA applet of the browser. However, it is well known in the art for using IP to carry voice or data or multimedia over Internet, and where the priority of voice is higher than data or control.

For example, **Jackowski** discloses in Figs. 1-12 and in the respective portions of the specification about the determining priorities of the network traffic (For example see Fig. 1; col. 1, lines 22-29, 39-52; wherein the telephony ("*voice call*") has the highest priority, transactions database traffic ("*JAVA applet*") has the medium priority and the file transfers/e-mail ("*image data*") have the lowest priority) and loading the application-classifier plugin for extensible services provided by Winsock for communication session (For example see Figs. 4-5).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the session's priority level for different applications as

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taught by **Jackowski**, by providing the plugins into the **Kiiskinen**'s API Mowgli socket with the motivation being to improve the fault-tolerance and performance in data communication.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jani Kiiskinen et al.** ("Data Channel Service for Wireless Telephone Links", 01-1996, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1996-1) in view of **Markku Kojo et al.** ("Connecting Mobile Workstations to the Internet over a Digital Cellular Telephone Network", 09-1994, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1994-39).

- In regard to claim 5, **Kiiskinen** discloses all the subject matter of the claimed invention as discussed in Part 4 above of this Office action about the Mowgli Data Channel Service 'MDCS' implemented the communication architecture for efficient operation over internetwork using TCP/IP-based communication; wherein the control functions of the application programming interface of 'Mowgli Socket Interface' allow the client to access the TCP/IP communication services or add application specific functionality for optimizing and improving the fault-tolerance and performance of the data communication. The MDCS provides the flow control for each data channel by using the TCP socket and Data Transfer Object 'DTO' priorities ("*setting priority on session-by-session basis*") and provides multiplexing and priority based scheduling of data channels over wireline Internet. Though, **Kiiskinen** does disclose about using the API, e.g. 'Mowgli socket interface', for optimizing the data communication through the channel priorities in communicating with application layer, Socket layer, TCP/UDP layer, IP

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layer and Network interface (For example see Figs. 1-2); but does not explicitly disclose about the terminal's layers. However, such implementation is known in the art.

For example, **Kojo** discloses about the Mowgli Data Channel Service 'MDCS' implemented the communication architecture for efficient operation over internetwork using TCP/IP-based communication; wherein different layers such as application layer, Socket layer, TCP/UDP layer, IP layer and Network interface are implemented at the mobile station ("*terminal*") and the fixed host ("*server*") (For example see Figs. 1-2).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to combine the session's priority level for different applications at the mobile node as taught by **Kojo**, by implementing the API into the **Kiiskinen**'s mobile node, with the motivation being to improve the ability to provide priority based on different applications at the mobile node.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pandya et al. (U.S.6,671,724), **Rinne et al.** (U.S.6,711,141), **Hericourt** (U.S.2001/0023451), **Puuskari, Mikko** (WO 99/48310), **Forsl w, Jan, Erik** (WO 99/05828) and **Markku Kojo et al.** (Enhanced Communication Services for Mobile TCP/IP Networking, 04-1995, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1995-15) are all cited to show devices and methods for improving the application

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classifier for policy-based network control in the communication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan
November 19, 2004



BRIAN NGUYEN
PRIMARY EXAMINER